

**REMARKS**

**INTRODUCTION**

In accordance with the foregoing, no claims have been amended. Claims 22, 23, 25, 46 and 47 are pending and under consideration.

**CLAIM REJECTIONS**

Claims 22, 23, 25, 46 and 47 were rejected under 35 USC 103(a) as being unpatentable over Ikegame et al. (US 5,208,703) (hereinafter "Ikegame").

**Claims 22, 23 and 25**

Claim 22 recites: "...wherein the magnetic circuit consists of a single pair of unipolar magnetized magnets positioned on the base to face each other at one side of the objective lens, and a coil assembly mountable on the lens holder between the pair of unipolar magnetized magnets..."

The Office Action relies on Figures 6-8 of Ikegame to show this feature of claim 22. As has been previously argued, in contrast to the magnetic circuit recited in claim 22, the magnetic circuit of Ikegame does not only consist of a single pair of unipolar magnetized magnets, but rather includes **one** pair of magnets 12 and then **two** pairs of magnets 13 for a total of six unipolar magnets. For exemplary purposes only, please compare any of Figures 6-8 of Ikegame with any of Figures 2, 4, 8 or 13 of the present application to see the difference.

The Examiner further notes that it would have been obvious for a person of ordinary skill in the art to remove a set of magnets to provide a single pair of magnets from the optical pickup actuator of Ikegame using the rationale that the magnetic circuit of Ikegame does not need multiple pairs of magnets to drive the magnetic circuit. This statement is respectfully traversed. Further, it is respectfully requested that the portion of Ikegame noting that less magnets than six are needed be cited.

Referring to 5:53-6:11 of Ikegame, the magnetic flux generated by the permanent magnet 12 passes through inner vertical sides 20 of the tracking coils 4 and the magnetic flux generated by the permanent magnets 13 passes through outer vertical sides 21 of the tracking coils. Further the magnetic flux generated by the permanent magnet 12 passes through one side of the focusing coil 2. Therefore, by supplying a focus error correcting current to the focusing coil 2, the focusing coil is subjected to forces which move the focusing coil and thus the movable member 3 in the focusing direction Z. Similarly by supplying a tracking error correcting current to

the tracking coils 4, the tracking coils are subjected to forces which drive the tracking coils and thus the movable member 3 in the tracking direction X. In the present embodiment, the flat tracking coils 4 are secured to the movable member 3, so that the dimension of the driving mechanism can be reduced in the track direction Y as well as in the tracking direction X. Further the yokes 10 can be provided on the base 5 having the U-shaped depression 6, so that the overall construction of the magnetic circuit can be simplified and the number of constructional elements can be reduced. Therefore, the magnetic circuit can be assembled simply and the cost of the apparatus can be reduced. Ikegame, 5:53-6:11 and Figure 8.

As discussed above, Ikegame shows what it conceives to be a simplified magnetic circuit that already **requires** one pair of magnets 12 and then two pairs of magnets 13 for a total of six unipolar magnets. By contrast, claim 22 recites that the magnetic circuit consists of a single pair of unipolar magnets, not three pairs of unipolar magnets.

Referring to MPEP 2111.03, when the phrase "consists of" appears in a clause of the body of a claim, rather than immediately following the preamble, it limits only the element set forth in that clause.

It is further respectfully submitted that the technical feature of claim 22 where the magnetic circuit consists of a single pair of unipolar magnetized magnets is not only directed to reducing cost, which the Examiner believes would be obvious. The use of only a single pair of unipolar magnetized magnets as recited in claim 22 provides for increased linearity. Linearity is reduced with an increase of a number of polarization areas applied onto one surface, as in Ikegame. This is because a zero magnetic flux is in a neutral zone that exists between polarization areas, and a resultant Lorentz force caused by the magnetic flux at a transient region varies closer to the neutral zone. The optical pickup actuator to claim 22 uses a single pair of unipolar magnetized magnets, and thus has excellent linearity. Again, this is a technical advantage not realized by Ikegame.

Claims 23 and 25 depend on claim 22 and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

#### **Claims 46 and 47**

Claim 46 recites: "...a magnetic circuit consisting of: a pair of unipolar magnetized magnets positioned on the base to face each other at one side of the objective lens..."

As discussed above with respect to claim 22, the magnetic circuit consists of a single pair of unipolar magnetized magnets, and therefore it is respectfully submitted that claim 46 patentably distinguishes over the magnetic circuit of Ikegame, which further includes three pairs of magnets (one pair of 12, two pairs of 13).

Claim 47 depends on claim 46 and is therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

#### CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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